

## FLOOD HAZARD - DISTRICT 3

### STATE PLAN

#### Goal 3: Mitigate the potential loss of life and property from flooding.

Objective 3.1: Increase the public awareness of flood mitigation.

Objective 3.2: Reduce the number of current and future structures in the floodplain.

Objective 3.3: Prevent flooding of structures and infrastructure from inadequate storm drainage and poorly designed irrigation waterways.

Objective 3.4: Provide adequate warning of flooding events.

Objective 3.5: Improve the effectiveness of flood insurance programs.

Objective 3.6: Reduce the risk of dam or levee failure.

COUNTY	MITIGATION PROJECT	PRIORITY
Beaverhead	Install diversion control structure in Blacktail Deer Creek channel.	M
Beaverhead	Replace culverts at Reeder and Railroad Streets (in Dillon) with bridges to withstand flooding.	H
Beaverhead	Remove permanent earthen structure which inhabits winter natural flows in Blacktail Deer Creek.	M
Beaverhead	Elevate Buster Brown road bridge over the Blacktail Deer Creek.	M
Beaverhead	Identify flood prone areas in county.	H
Beaverhead	Install a permanent stream gage (satellite communication) approx. 15 miles west on Grasshopper Creek to monitor flows about 12 hours before flows reach Beaverhead River. Allows dam tenders time to adjust flows out of dam and avoid flooding.	H
Beaverhead	Implement floodplain studies on unstudied rivers and streams with flood potential.	H
Beaverhead	Install stream gages (satellite communications) in several unmonitored streams in the county.	M
Beaverhead	Clean channels of debris to maintain an adequate channel size.	M

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COUNTY	MITIGATION PROJECT	PRIORITY
Beaverhead	Install early warning system at Clark Canyon Dam and Lima Dam for dam failure notification.	H
Broadwater	Public education program targeting homes in or near the floodplain, ice jam, or dam failure inundation areas on flood mitigation options.	H
Broadwater	Evaluate the Montana Ditch crossing to ensure that the Missouri River cannot flood the City, as occurred in 1963.	M
Broadwater	Disseminate flood hazard mapping to first responders and homeowners.	M
Broadwater	Public education program on standard homeowner's insurance with emphasis on exclusions such as flooding and earthquakes and recent industry changes requiring wildfire defensible space in some areas.	M
Gallatin	Implement security measures at the dams to include early warning systems.	M
Gallatin	Mitigate damages to critical facilities in the 100 year flood plain.	M
Gallatin	Education the public on flood insurance.	M
Gallatin	Remove woody debris, as needed to protect public safety, but not excessively as such debris is important to ecological health.	M

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COUNTY	MITIGATION PROJECT	PRIORITY
Gallatin	Map floodplain areas and join the National Flood Insurance Program in Belgrade, Manhattan and Three Forks.	M
Gallatin	Conduct an analysis on the feasibility of a floodplain and floodway buyout and/or relocation program.	M
Gallatin	Flood insurance education for the public.	M
Gallatin	Study alternative flood mitigation measures.	M
Gallatin	Consider more restrictive regulations or prohibition of development in the floodplain.	M
Gallatin	Establish financial incentives for landowners to remove, modify or replace obsolete and non-functioning flood control and bank stabilization structures.	M
Gallatin	Secure digital floodplain mapping for all rivers and streams in Gallatin County.	NA
Jefferson	Implement the plan to upgrade drainage in the Milligan Canyon Road area.	N
Jefferson	Clean out unused irrigation head gates on Whitetail Creek.	N
Lewis & Clark	Install culvert at Wylie and York roads.	M

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COUNTY	MITIGATION PROJECT	PRIORITY
Lewis & Clark	Install culvert at Birdseye and Barrett roads.	L
Lewis & Clark	Construct retention pond in East Helena.	M
Lewis & Clark	Construct bridge at Keir Dr. in East Helena Valley.	H
Lewis & Clark	Build detention pond in the upper to middle reaches of Last Chance Gulch.	H
Lewis & Clark	Install culverts at Sierra Road.	H
Lewis & Clark	Construct new bridge at Wylie Dr and Prickly Pear Creek north of East Helena.	H
Lewis & Clark	Build detention pond in the upper reaches of Davis Gulch.	M
Lewis & Clark	Replace cobble wall along Prickly Pear Creek in East Helena to increase carrying capacity.	H
Lewis & Clark	Reroute Silver Creek around the Sewell Subdivision.	H
Lewis & Clark	Improve the Kmart retention ponds.	H
Lewis & Clark	Install culverts at Forestvale and Mill roads.	H

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COUNTY	MITIGATION PROJECT	PRIORITY
Madison	Using all available information, identify possible hazard mitigation efforts for targets at risk. This includes floodplain buy-outs and conservation easements, zoning to limit building in high hazard areas, and mitigating structures at risk.	L
Madison	Conduct a floodplain mapping project for Madison Co., Town of Ennis, Town of Sheridan, and Town of Twin Bridges, consistent with FEMA mapping protocol.	L
Park	Remove abandoned bridge abutments and piers.	M
Park	Conduct an analysis on the feasibility of a floodplain and floodway buyout and/or relocation program.	M
Park	Establish a Bank Stabilization Information Clearinghouse.	M
Park	Map floodplain areas and join the National Flood Insurance Program in the Town of Clyde Park.	M
Park	Remove woody debris, as needed to protect public safety, but not excessively as such debris is important to ecological health.	M
Park	Consider zero backwater standards during bridge reconstruction, particularly at the Highway 10/89 South Bridge and the railroad bridge just downstream.	M
Park	Study alternative flood mitigation measures.	M

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COUNTY	MITIGATION PROJECT	PRIORITY
Park	Investigate widening the channel near the City of Livingston levee by resloping the north bank in a terraced fashion in the area of the preliminary floodplain map cross sections #55,000 and #56,000.	M
Park	Require future school facilities be constructed outside the floodplain.	M
Park	Conduct Bank Stabilization studies on project effectiveness and ecological health.	M
Park	Establish financial incentives for landowners to remove, modify, or replace obsolete and non-functioning flood control and bank stabilization structures.	M
Park	Consider more restrictive regulations or prohibition of development in the floodplain.	M
Park	Lessen hydraulic impacts when the following bridges are replaced: Emigrant, Carter's, Interstate 90, Railroad at Highway 10/89 South, Highway 10/89 South, Highway 89 North, Railroad at Highway 89 North and Springdale.	M
Park	Join and obtain points for the Community Rating System of the National Flood Insurance Program in Park Co. and the City of Livingston.	M
Park	Educate the public on flood insurance.	M

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COUNTY	MITIGATION PROJECT	PRIORITY
Park	Conduct a US Army Corps of Engineers Section 205 Flood Control Study.	M
Park	Conduct a river migration study to measure the potential for river channel avulsion between the Livingston Ditch headgate and Interstate 90.	M
Park	Propose to the public a Park Co. bond issue for conservation easements and promote the use of state, federal and private funds to protect values along the Yellowstone River.	M
Sweet Grass	Replace Greycliff bridge over the Yellowstone River.	H